COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Valley Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Virginia Electric & Power Company aka Dominion
Route 656 Fluvanna County, Virginia
Permit No. VRO40199

Title IV of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain electrical generation facilities have federal Air Pollution Operating Permits, called Title IV Operating Permits. As required by 40 CFR Part 70, 9 VAC 5 Chapter 80, Article 3 and Chapter 140 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution, Virginia Electric & Power Company has applied for a Title IV Operating Permit for its Bremo Power Station electric generation facility. The Department has reviewed the application and has prepared a draft Federal Operating Permit. This permit is based upon Federal Clean Air Act Acid Rain permitting requirements of Title IV, federal operating permit requirements of Title V, and Chapter 80, Article 3 and Chapter 140 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution.

FACILITY INFORMATION

Permittee
Virginia Electric & Power Company aka Dominion
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Facility
Dominion - Bremo Power Station
1038 Bremo Road
Bremo Bluff Virginia 23022

Plant ID No. 51-065-0001

SOURCE DESCRIPTION

Facility Description: NAICS Code 221112 (Electric Power Generation)

The Bremo Power Station is a coal-fired electric power generating facility located in Fluvanna County, Virginia. The facility includes two dry bottom wall-fired Babcock and Wilcox boilers rated at 912 and 1,699 million Btu per hour design heat input capacity. Particulate emissions from these boilers are controlled by electrostatic precipitators. The facility also includes a coal handling operation and a synthetic fuel plant.

The facility is a Title V major source of particulate matter less than or equal to ten microns in diameter (PM-10), sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), hydrogen fluoride (HF), hydrochloric acid (HCl) and total HAPs (combined). The source is located in an attainment area for all pollutants and is a PSD major source. The facility is also subject to the NO_x Budget Trading Program regulations (9 VAC 5 Chapter 140) and the Title IV Acid Rain regulations (9 VAC 5 Chapter 80, Article 3). The facility was issued a Phase II Acid Rain permit on January 1, 2003 and this permit expires on December 31, 2007. The facility is also subject to the Clean Air Interstate Rule (CAIR) Program (40 CFR Part 96) and the requirements will be included with this federal operating permit. The coal-handling portion of the facility was permitted under a minor NSR permit issued on February 26, 2002. The synthetic fuel plant was permitted under a minor NSR permit issued on July 29, 2005. Bremo's initial Federal Operating Permit – Article 3 was issued on April 29, 2004 with an administrative amendment on June 8, 2005 and a significant modification on October 25, 2006 and expires on December 31, 2007.

COMPLIANCE STATUS

The facility is inspected once a year. The facility was last inspected on August 16, 2007 and is currently considered in compliance.
On April 22, 2003, the U.S. Environmental Protection Agency (EPA) and the Department of Justice

Justice announced a settlement with Virginia Electric & Power Company (VEPCO) to resolve Clean Air Act violations at eight of VEPCO's coal-fired power plants including Bremo Power Station. The "Consent Decree" was entered by the United States District Court for the Eastern District Court of Virginia, Civil Action Nos. 03-CV-517-A and 03-CV-603-A, on October 10, 2003 between VEPCO and the United States, et al. The Title IV renewal permit includes requirements of the Consent Decree for Bremo Power Station (Section VI) at least as stringent as the terms of the Consent Decree.

CHANGES SINCE INITIAL PERMIT

On June 8, 2005, an administrative amendment was used to correct an error in the monitoring requirements for the Unit 3 ESP. On October 25, 2006, the permit was modified using the significant modification procedures to include NSR requirements for the Syn Fuel Plant.

Since the significant permit modification to Bremo's Federal Operating Permit, the following changes were made to the draft renewal Federal Operating Permit:

- *Compliance Assurance Monitoring (CAM) Plan:* The two main boilers at Bremo (Units ES-3 and ES-4) are subject to the requirements of 40 CFR Part 64. The CAM boilerplate language was added as Section III.C along with the CAM recordkeeping requirement to Section III.D and the CAM Reporting requirements as Section III.F. The CAM Plan for the electrostatic precipitators (ESP-3 and ESP-4) is included as Attachment A to the permit.

- *Consent Order Requirements:* The Federal Operating Permit includes Consent Order Requirements (Section VI) that is at least as stringent as the requirements from the April 22, 2003 Consent Decree between the United States and VEPCO.

- *Phase II Acid Rain Permit:* The Phase II Acid Rain Permit was incorporated into the permit. Additional language was added concerning the NO_x Averaging Plan.

- *Clean Air Interstate Rule (CAIR) Requirements:* CAIR requirements were added to Section XII.

These changes are discussed in more detail below.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission ID	Stack	Emission Unit Description	Size/Rated Capacit	Pollution Con Device (PCI Description	PCD I	Pollutar Controll	Applicable P Date **
Fuel Burning Equipment							
ES-1	EP-	Kewanee Package Boiler, Model #H3 200-02-250 Distillate oil/propane-fired (1991)	8.693 mmBtu/hr	-	-	-	-
ES-2	EP-	Solar Combustion Turbine Model T-351N-21 Kerosene/distillate oil-fired (1967)	5.24 mmBtu/hr	-	-	-	-
ES-3	EP-	Babcock and Wilcox Boiler (Unit 3) Pulverized coal-fired (distillate oil an oil primarily used for start-up and flar stabilization) (1950)	912 mmBtu/hr (coa 504 mmBtu/hr (oil	Western Precipi Type R	ESP-3	PM PM-10	-
ES-4	EP-	Babcock and Wilcox Boiler voluntari retrofitted with low NO_x burners in 19 (Unit 4) Pulverized coal-fired (distillate oil an oil primarily used for start-up and flar stabilization) (1958)	1699 mmBtu/hr (co 504 mmBtu/hr (oil	Western Precipi Type R	ESP-4	PM PM-10	-

Emission ID	Stack	Emission Unit Description	Size/Rated Capacit	Pollution Con Device (PCI Description	PCD I	Pollutar Controll	Applicable P Date **
Coal Handling System							
ES-5a	ES-	Coal Handling – Railcar Unloading (NSPS Subpart Y	550 tons/hr	Enclosure	-	PM PM-10	2/26/02
ES-5b	ES-	Coal Handling – Crushing (1986) NS Subpart Y	550 tons/hr	Enclosure	-	PM PM-10	2/26/02
ES-5c	ES-	Coal Handling – Conveying System (NSPS Subpart Y	550 tons/hr	Enclosure	-	PM PM-10	2/26/02
ES-5d	ES-	Coal Handling – Storage Piles	-	-	-	PM PM-10	2/26/02
Syn Fuel Plant							
ES-6a		Syn Fuel Plant - One fixed grated griz screen (2005) NSPS, Subpart Y	150 tons/hr	Enclosure/W Suppression		PM PM-10	7/29/05
ES-6b		Syn Fuel Plant - Four Conveyors (200 NSPS, Subpart Y	150 tons/hr	Enclosure/W Suppression		PM PM-10	7/29/05
ES-6c		Syn Fuel Plant - Two Pug Mixers (20	150 tons/hr	Enclosure		PM PM-10	7/29/05
ES-6d		Syn Fuel Plant - Two Briquetters (200	150 tons/hr	Enclosure		PM PM-10	7/29/05
ES-6e		Syn Fuel Plant - Radial Stacker (2005	150 tons/hr	Enclosure/W Suppression		PM PM-10	7/29/05
ES-6f		Syn Fuel Plant - Two Raw Binder Tar (2005)	150 tons/hr				7/29/05

Emission ID	Stack	Emission Unit Description	Size/Rated Capacit	Pollution Con Device (PCI Description	PCD I	Pollutar Controll	Applicable P Date **
ES-6g		Syn Fuel Plant - Mixing Tank (2005)	150 tons/hr				7/29/05
ES-6h		Syn Fuel Plant - Finished Binder Tan (2005)	150 tons/hr				7/29/05

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

**Minor New Source Review permit dated 2/26/02 is for the installation and operation of a coal handling system for the power plant. Minor New Source Review permit dated 7/29/05 is for the installation and operation of a syn fuel plant for the power plant.

EMISSIONS INVENTORY

Annual emissions summarized in the following table are derived in part from the 2006 CEDS emission report and DEQ spreadsheets. A copy of the report and spreadsheets are attached as Attachment A.

2006 Pollutant Emissions (Plantwide Total)	
Pollutant	Tons Emitted
Criteria Pollutants	
PM-10	1
VOC	
NO_x	33
SO_2	120
CO	1
Lead (also a HAP)	
Hazardous Air Pollutants (HAPs)*	
Hydrogen Fluoride	
Hydrochloric Acid	3
Arsenic	
Beryllium	
Cadmium	
Chromium Compounds	
Manganese Compounds	
Mercury	
Nickel Compounds	
POM	

*calculated from DEQ spreadsheets

EMISSION UNIT APPLICABLE REQUIREMENTS

Fuel Burning Equipment Units: ES-1, ES-2, ES-3, and ES-4

Limitations

The following applicable limitations are state and federal requirements from the Phase II acid rain permit effective January 1, 2008, which will be incorporated into the Title IV federal operating permit.

SO_2 allowance allocations are as follows:

ES-3 (Unit 3)	2028 tons	for years 2008 and 2009
ES-3 (Unit 3)	1768 tons	for years 2010, 2011, and 2012

ES-4 (Unit 4)	5158 tons	for years 2008 and 2009
ES-4 (Unit 4)	5170 tons	for years 2010, 2011, and 2012

VEPCO submitted a Phase II Acid Rain Permit renewal application dated June 26, 2007 and received June 29, 2007. Attached to the application were the Phase II NO_x Compliance Plan and the Phase II NO_x Averaging Plan which included year 2008 through 2012 to coincide with the Acid Rain Permit. On August 17, 2007, DEQ received a letter from VEPCO which instructed us to disregard the Phase II NO_x Averaging Plan and stated that VEPCO intends to comply with the NO_x limit of 0.40 lb/mmBtu beginning January 1, 2008, using a new/revised averaging plan. By regulation, VEPCO has until July 1, 2008 to submit the revised averaging plan. Pursuant to 40 CFR 76, a standard NO_x compliance plan will be used for Units 3 and 4, effective for calendar year 2008 through calendar year 2012. Under the NO_x compliance plan, the annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation under 40 CFR 76.7(a)(2), of 0.46 lb/mmBtu of heat input for dry bottom wall-fired boilers not applying cell burner technology.

Since the revised averaging plan may not be submitted until after the permit becomes effective on January 1, 2008, DEQ staff received EPA's approval of the following proposed wording for the NO_x averaging plan and NO_x compliance plan section of the permit:

> *If the permittee submits an averaging plan in accordance with 40 CFR Part 76 (76.11(b)(1)) and the DEQ approves the plan, then the permittee shall not exceed the annual average NO_x emission rate specified in the averaging plan for those units specified in the averaging plan. The approved averaging plan emission rate will replace the applicable emission limitation listed in 40 CFR 76.6 or 76.7. If a plan is approved and then later rescinded by the DEQ, then the unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation under 40 CFR 76.7(a)(2), of 0.46 lb/mmBtu of heat input for dry bottom wall-fired boilers not applying cell burner technology.*

ES-3 (Unit 3) and ES-4 (Unit 4) also meet the definition of a NO_x Budget Unit and are subject to the NO_x Budget emission limitations under 9 VAC 5-140-40. Section XI of the Acid Rain Operating Permit includes the NO_x Budget Trading Program Requirements.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

> 9 VAC 5-80-490, Acid Rain Operating Permits – Units ES-3 and ES-4 are subject to the acid rain requirements that specify air pollution control equipment, approved fuels, fuel certification, and operation and maintenance of boilers and control equipment.
>
> 9 VAC 5-40-900, Emission Standards for Fuel Burning Equipment – Standard for Particulate Matter – Units ES-2, ES-3, and ES-4 are considered a fuel burning installation (all fuel burning

(all fuel burning equipment units within a stationary source in operation prior to October 5, 1979). Allowable emissions for the installation, in pounds of particulate per million BTU input, are calculated using the following formula:

Maximum Allowable Emission Ration (E) = $1.0906H^{-0.2594}$

where H is the total capacity in millions of BTU per hour of the installation. Therefore:

E = 1.0906 x $(5.24 + 912 + 1699)^{-0.2594}$ = 0.1416 lb/mmBTU input

Allowable particulate emissions are the product of the emission ration E and the total heat input of the installation in mmBTU/hr. Therefore:

Maximum Allowable Emissions = 0.1416 x 2616.24 = 370.46 lb/hr

This rule also applies to Unit ES-1. However, because this unit was installed after October 5, 1979, the unit is not part of the fuel burning installation and its allowable particulate emissions are calculated separately. The maximum allowable emission ratio for units with a capacity of less than 10 million BTU/hr is 0.6 pounds of particulate per million BTU input. Therefore:

Maximum Allowable Emissions = 0.6 x 8.693 = 5.22 lbs/hr

9 VAC 5-40-910, Emission Allocation System – This rule allows the facility to proportion the allowable particulate emissions among the units in the fuel burning installation (all fuel burning equipment units within a stationary source in operation prior to October 5, 1979). In a letter dated December 9, 2003 (See Attachment B), VEPCO requested a change to their initial particulate allocation because some of the units had been removed or replaced. In a letter dated January 7, 2004, DEQ approved a new particulate allocation for VEPCO's Bremo Power Station. The effective date of the new allocation was January 6, 2004. A copy of the particulate emission allocation is included as Attachment C.

The particulate emissions are allocated as follows:

ES-2	2.00 lbs/hr
ES-3	128.51 lbs/hr
ES-4	239.95 lbs/hr

9 VAC 5-40-930, Emission Standards for Fuel Burning Equipment – Standard for Sulfur

Dioxide – Allowable emissions, in pounds of sulfur dioxide per hour, are calculated using the following formula:

Maximum Allowable Emissions (S) = 2.64K

where K is the allowable heat input at total capacity in mmBTU/hr. Therefore:

ES-1 S = 2.64 x 8.693 = 22.95 lbs/hr

ES-2 S = 2.64 x 5.24 = 13.83 lbs/hr

ES-3 S = 2.64 x 912 = 2407.68 lbs/hr

ES-4 S = 2.64 x 1699 = 4485.36 lbs/hr

9 VAC 5-50-80, Standard for Visible Emissions – Visible emission limit for new and modified units shall not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 % opacity applies to ES-1 (installed in 1991).

9 VAC 5-40-80 and 9 VAC 5-40-940, Standard for Visible Emissions – Visible emission limit for existing units shall not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 60% opacity applies to fuel burning units ES-2, ES-3, and ES-4.

The applicable limitations for Units ES-3 and ES-4 from the Consent Decree entered by the United States District Court for the Eastern District of Virginia, Civil Action Nos. 03-CV-517-A and 03-CV-603-A, filed on October 10, 2003 between VEPCO and the United States, et al (the "Consent Decree") are included in Section VI - Consent Decree Requirements of the Title IV Operating Permit. These requirements will be discussed in Consent Decree Applicable Requirements section of this document.

Monitoring

This permit includes requirements for monitoring to satisfy 40 CFR Parts 70 and 75.

Units ES-3 and ES-4

9 VAC 5-40-1000 and 40 CFR 75.10 require units ES-3 and ES-4 to install, operate, calibrate and maintain continuous monitors for the purpose of monitoring opacity, sulfur dioxide emissions, and nitrogen oxide emissions.

The permit requires electrostatic precipitators (ESPs) for control of particulate emissions from the boiler units ES-3 and ES-4. Properly operating ESPs should be able to comply with the opacity limit (20%)

opacity limit (20%) and the particulate limits of 128.51 lbs/hr for unit ES-3 and 239.95 lbs/hr for unit ES-4.

Initial particulate testing was performed on Units ES-3 and ES-4 to verify compliance with the particulate limits. Initial testing was required by December 31, 2004 and was completed on November 3, 2004 for Unit ES-4 and December 7, 2004 for Unit ES-3. Subsequent testing was based on the results of the initial tests. Since the initial test results were less than 50% of the emission limit, then no additional tests was required for the term of the permit. The testing frequency will remain unchanged in the renewal permit. Therefore, particulate testing will be required at least once per permit term. If the test results are less than 50% of the emission limit, then no additional tests are required for the term of the permit. For results between 50 and 80 percent of the allowable limit, testing is required every 30 months. For results greater than 80 percent of the allowable limit, testing is required annually. Performance tests for particulate matter conducted under the Consent Decree shall satisfy these testing requirements as long as the tests are performed with a frequency of at least once per permit term.

Monitoring is required for the two ESP units to ensure the control devices are operating properly. ESP-3 is required to have a device to continuously measure the primary voltage and the primary current. The relative spark rate is to be determined by visual observation of the primary voltage and current analogue meter output. ESP-4 is required to have a device to continuously measure the primary and secondary voltage, the primary and secondary current, and the spark rate for each field. The operating condition of each field is to be observed at least once per 12-hour shift. Proper operation of the ESP units will ensure continued compliance with the particulate limits and the opacity standards.

Additionally, daily review of the recorded opacity data is required. Boiler and ESP operating parameters are to be checked if opacity approaches the applicable standard. If boilers or ESPs are not operating within normal parameters, adjustments shall be made to return the unit(s) to proper operation. Opacity data shall be reviewed again to confirm proper operations.

Units ES-3 and ES-4 should be able to comply with the sulfur dioxide (SO_2) limits. Emissions were estimated using the most current AP-42 emission factors, a coal Btu value of 11,000 Btu/lb, and a sulfur content of 1%. The SO_2 emission estimate for unit ES-3 is 1577.0 lbs/hr. For unit ES-4, the SO_2 emission estimate is 2934.74 lbs/hr. These values are well below the respective emission limits of 2407.68 lbs/hr for unit ES-3 and 4485.36 lbs/hr for unit ES-4.

To verify compliance with the hourly PM emission limits for units ES-3 and ES-4, the permittee is required to calculate daily emissions on a monthly basis. Until PM testing has been completed, AP-42 or other approved emission factors were used to calculate the emissions. Once particulate testing is completed, emission factors derived from the stack tests should be used for the particulate emission calculations. CEM data will be used to verify hourly SO_2 emissions.

Units ES-1 and ES-2

Actual emissions from the operation of units ES-1 and ES-2 will be calculated using the following equation:

$$E = F \times O$$

Where:

E = Emission rate (lb/time period)

F = Pollutant specific emission factors as follows:

ES-1

	LPG	distillate oil
PM/PM-10	0.6 lb/1000 gal	3.3 lb/1000 gal
SO_2	1.5 lb/1000 gal	71 lb/1000 gal

ES-2

PM/PM-10	0.31 lb/mmBTU
SO_2	0.29 lb/mmBTU

O = Rated capacity of the unit (1000 gal/hr or mmBTU/hr)

Calculations have been included in Attachment D to demonstrate that the emission limits can be met for ES-1 and ES-2. Monthly inspections of units ES-1 and ES-2 are required when burning distillate oil. If during the inspection, visible emissions are observed, an EPA, Method 9 visible emission evaluation is required.

Compliance Assurance Monitoring (CAM) Plan

The two main boilers at the Bremo Power Station (ES-3 and ES-4) are subject to the requirements of 40 CFR Part 64, Compliance Assurance Monitoring (CAM). These are the only two pollutant-specific emissions units at Bremo that meet all three criteria for applicability under the CAM program. The criteria are:

(1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant;

(2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and

(3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

Each unit (ES-3 and ES-4) is subject to CAM for emissions of particulate matter (PM). VEPCO submitted a CAM Plan for the ESPs on Units ES-3 and ES-4 with their initial renewal application and a revised CAM plan dated September 6, 2007. The proposed CAM Plan includes the following compliance indicators:

1. Opacity monitored by the Continuous Opacity Monitoring System (COMS);
2. Transformer rectifier observation; and
3. Precipitator rapper observation.

Opacity measured by the COMS was selected as the first indicator because failure of the ESPs to control PM emissions will be obvious in terms of opacity. The COMS are required by Condition III.B.1 and are installed, calibrated, maintained and operated in accordance with 9 VAC 5-40-40 and 9 VAC 5-40-41. Opacity is measured continuously by the COMS and opacity data are collected and retained by a computerized Data Acquisition and Handling System (DAHS).

Daily observation of each available (currently in service) rectifier or rectifier alarm was selected as the second indicator. Each ESP has its own transformer rectifiers. Observation of the available rectifiers verifies that adequate electrical power is supplied to the ESPs and that power levels are maintained consistent with manufacturer's specifications, operational design of the equipment and good engineering practices. Any failure of the ESP equipment is recorded in an event log. The log also includes a history of the actions taken to correct the problem and restore the equipment back to operation.

Daily observation of each available (currently in service) rapper or its controls was selected as the third indicator. Each ESP has its own precipitator rappers. Observation of the available rappers verifies that they are energized and that scheduled cleaning is performed on the ESPs. Any failure of the ESP equipment is recorded in an event log. The log also includes a history of the actions taken to correct the problem and restore the equipment back to operation.

The opacity monitoring, transformer rectifier observations, and precipitator rapper observations included in the permit's CAM Plan for ESPs (ESP-3 and ESP-4) will provide assurance of compliance with the particulate emission standards for the boilers (ES-3 and ES-4) and therefore satisfy the requirements of 40 CFR 64.

The permit establishes thresholds (exceedances or excursions exceeding 5 percent duration of the operating time for the boilers (ES-3 and ES-4) for a semiannual reporting period) after which VEPCO is required to develop a CAM Quality Improvement Plan (QIP) according to 40 CFR 64.8.

The CAM boilerplate language was added as Section III.C along with the CAM recordkeeping requirement in Section III.D and the CAM Reporting requirements in Section III.F. The CAM Plan for the electrostatic precipitators (ESP-3 and ESP-4) is included as Attachment A to the permit.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include the annual fuel throughputs of coal and distillate oil, fuel supplier certifications, DEQ-approved emission factors and equations to demonstrate compliance with emission limits for ES-1 and ES-2, daily emissions calculated monthly for PM for units ES-3 and ES-4, hours of operation and visible emissions observation (VEO) results for units ES-1 and ES-2, COM and CEM records, ESP monitoring records, operator training and maintenance records, and performance tests and VEEs.

Testing

Particulate testing for units ES-3 and ES-4 was required by December 31, 2004 to demonstrate compliance with the particulate emission limits contained in the permit. Initial testing was completed on November 3, 2004 for Unit ES-4 and December 7, 2004 for Unit ES-3. Subsequent testing was based on the results of the initial tests. Since the initial test results were less than 50% of the emission limit, then no additional tests was required for the term of the permit. The testing frequency will remain unchanged in the renewal permit. Therefore, particulate testing will be required at least once per permit term. If the test results are less than 50% of the emission limit, then no additional tests are required for the term of the permit. For results between 50 and 80 percent of the allowable limit, testing is required every 30 months. For results greater than 80 percent of the allowable limit, testing is required annually. Performance tests for particulate matter conducted under the Consent Decree shall satisfy these testing requirements as long as they are performed with a frequency of at least once per permit term. A table of test methods has been included in the permit if additional testing beyond what is currently specified is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

EMISSION UNIT APPLICABLE REQUIREMENTS

Coal Handling System: ES-5

Limitations

The following limitations are state BACT requirements from the minor NSR permit issued on February 26, 2002. Please note that the condition numbers are from the 2002 permit; a copy of the permit is enclosed as Attachment E.

Condition 3:	Requires railcar unloading (ES-5a) to be controlled by partial enclosure.
Condition 4:	Requires crushing and conveying (ES-5b & ES-5c) to be controlled by enclosures.

Condition 5: Fugitive dust control requirements

Condition 6: Coal throughput limit

Condition 8: Visible emission limit

Condition 7: Particulate emission limits for inventory purposes

Condition 17: Requires maintenance schedule, inventory of spare parts, operating procedures, and operator training

Monitoring and Recordkeeping

Per 40 CFR Part 64, Compliance Assurance Monitoring (CAM) applies to a pollutant-specific emissions unit at a major source that is required to obtain a Part 70 or 71 permit if the unit satisfies all of the following criteria:

(1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant;

(2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and

(3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

VEPCO does not use a control device on any part of the coal handling system to achieve compliance with the particulate emission limit. Enclosures are used on the coal handling system but they are not considered control devices per 40 CFR 64.1. Therefore, the coal handling system does not meet the criteria for CAM applicability.

The permit includes requirements for monitoring and recordkeeping necessary to demonstrate compliance with the permit.

The permittee is required to perform a weekly inspection of the fugitive dust control system for the coal handling operation, perform a daily visual survey of the coal handling activities for sources of visible emissions, and to perform a VEE if visible emissions are observed. As long as the facility maintains the enclosures required by the permit, the particulate emission limits should be met. Required records include, annual coal processed, daily logs of the visual survey, visible emissions evaluations, and maintenance and operator training.

Testing

The permit requires EPA Method 9 testing when visible emissions are observed from the coal handling

handling equipment. A table of test methods has been included in the permit if additional testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No specific reporting has been included in the permit for the coal handling processes.

Streamlined Requirements

The following conditions in the NSR permit have not been included for the reasons provided:

Condition 9 requiring the coal handling equipment to be operated in compliance with requirements under 40 CFR 60, Subpart Y, except as specified in the minor NSR permit, has not been included. The required 40 CFR 60, Subpart Y requirements have been included in the operating permit.

Conditions 10 and 13 requiring an initial VEE and initial notifications have not been included because these conditions have already been completed.

The particulate emission limits contained in the permit are more stringent than the Virginia Administrative Code Standard for particulate matter in 9 VAC 5-40-260. Therefore, only the more stringent particulate emission limits were included in the permit.

The visible emission limits and fugitive dust requirements contained in the permit are more stringent than the Virginia Administrative Code Standard for visible emission in 9 VAC 5-40-1990 and for fugitive dust/emissions in 9 VAC 5-40-2000. Therefore, only the more stringent limits were included in the permit.

EMISSION UNIT APPLICABLE REQUIREMENTS

Syn Fuel Plant: ES-6

Limitations

The following limitations are requirements from the minor NSR permit issued on July 29, 2005. Please note that the condition numbers are from the 2005 permit; a copy of the permit is enclosed as Attachment F.

Condition 3: Particulate emissions control requirements for the Syn Fuel Plant

Condition 4: Fugitive dust control requirements

Condition 5: Coal processing throughput limit for the Syn Fuel Plant

Condition 6: Emissions limits for PM, PM-10, and VOC for the operation of the Syn Fuel Plant

Condition 7: Visible emissions limit from the Syn Fuel Plant of 20% opacity

Condition 8: 40 CFR Part 60, Subpart Y requirements for the Syn Fuel Plant NSPS equipment (ES-6a and ES-6b)

Monitoring and Recordkeeping

Per 40 CFR Part 64, Compliance Assurance Monitoring (CAM) applies to a pollutant-specific emissions unit at a major source that is required to obtain a Part 70 or 71 permit if the unit satisfies all of the following criteria:

(1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant;

(2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and

(3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

VEPCO's potential pre-control device emissions for PM and VOC from the syn fuel plant are both less than the Title V major source threshold of 100 tons per year. Therefore, the syn fuel plant does not meet the criteria for CAM applicability.

The permit includes requirements for monitoring and recordkeeping necessary to demonstrate compliance with the permit.

The permittee is required to perform a weekly inspection of the fugitive dust control system for the Syn Fuel Plant, perform a daily visual survey of the Syn Fuel Plant for sources of visible emissions, and to perform a VEE if visible emissions are observed. As long as the facility maintains the enclosures required by the permit, the particulate emission limits should be met. Required records include, annual coal processed through the Syn Fuel Plant, annual amount of latex binding sprayed, MSDSs for each latex binding agent, monthly and annual cumulative emissions of VOC and each HAP for the Syn Fuel Plant, visible emissions evaluations, scheduled and unscheduled maintenance, daily logs of the visual surveys, and weekly logs of fugitive dust emissions control system inspections.

Testing

An initial VEE is required for the Syn Fuel Plant. The permit also requires EPA Method 9 testing when

testing when visible emissions are observed from the Syn Fuel Plant. A table of test methods has been included in the permit if additional testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No specific reporting has been included in the permit for the Syn Fuel Plant.

Streamlined Requirements

The following conditions in the NSR permit have not been included for the reasons provided:

Condition 12 requiring initial notifications has not been included because this condition has already been completed.

The particulate emission limits contained in the permit are more stringent than the Virginia Administrative Code Standard for particulate matter in 9 VAC 5-40-260. Therefore, only the more stringent particulate emission limits were included in the permit.

The visible emission limits and fugitive dust requirements contained in the permit are more stringent than the Virginia Administrative Code Standard for visible emission in 9 VAC 5-40-1990 and for fugitive dust/emissions in 9 VAC 5-40-2000. Therefore, only the more stringent limits were included in the permit.

CONSENT DECREE REQUIREMENTS

Units: ES-3 and ES-4

Based on recent discussions with EPA Region III, Title IV and Title V permits for the eight plants incorporated in the VEPCO 2003 Consent Decree (including Bremo Power Station) should include applicable requirements for any air pollution controls that are installed or will be installed during the five year renewal term. VEPCO submitted applicable requirements related to the Consent Decree as follows:

Limitations

Per Paragraph 78 of the Consent Decree, the permittee shall operate each electrostatic precipitator (ESP-3 and ESP-4) on boilers (ES-3 and ES-4) to maximize particulate matter (PM) emission reductions through the procedures listed in the Consent Decree. No later than April 21, 2009, the permittee shall complete an ESP optimization study for each boiler (ES-3 and ES-4) per the requirements in Paragraph 79 of the Consent Decree.

Within 270 days after the permittee receives the approval of each ESP optimization study, the permittee

permittee may elect to achieve the objectives of, and thereby avoid, the Pollution Control Upgrade Analysis by operating and maintaining the ESPs (ESP-3 and ESP-4) in compliance with the approved respective ESP optimization plan and the permittee shall meet a PM emission limit of 0.030 lb/mmBtu at the stack for the boilers (ES-3 and ES-4) except during periods of startup and shutdown (as defined in Paragraph 81 of the Consent Decree), or during periods of control equipment or boiler (ES-3 and ES-4) malfunction, if the malfunction meets the requirements of the Force Majeure Section of the Consent Decree (Section XXVI).

Periods of startup shall not exceed two hours after cessation of injection of oil into the boilers (ES-3 and ES-4). Periods of shutdown shall only commence when any oil is introduced into the boilers (ES-3 and ES-4).

Monitoring and Recordkeeping

Per Paragraph 78 of the Consent Decree, VEPCO must conduct inspections of the operation of the ESP rectifiers and rappers once per shift to determine if the rectifiers and rappers are functioning within manufacturers' specifications, the operational design of the unit, and good engineering practices or not functioning. The results of the inspections shall be recorded in a log. If VEPCO determines that the ESP rectifiers and rappers are not functioning or are functioning outside of manufacturers' specifications and good engineering practices, VEPCO shall use best efforts to repair the element no later than the next available Unit outage appropriate to the repair task.

Paragraph 78 also requires that the permittee maintain records of all emission data and operating parameters necessary to demonstrate compliance with the permit. These records include:

- Log of all daily inspections and ESP event and malfunction information, including reasons and corrective actions.
- Startup and shutdown events for Units ES-3 and ES-4.
- Results of all EPA Reference Method tests.

Testing

Per Paragraph 95 of the Consent Decree, stack tests are required for particulate matter on Units ES-3 and ES-4 to demonstrate compliance with the particulate emission limits contained in Conditions III.A.7 and III.A.8. The tests must be conducted at least once per every four successive "QA Operating Quarters". A "QA Operating Quarter" means a calendar quarter in which there are at least 168 unit operating hours or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours. A stack operating hour means a clock hour during which flue gases flow through a particular stack or duct (either for the entire hour or for part of the hour) while the associated

entire hour or for part of the hour) while the associated units (ES-3 and ES-4) are combusting fuel. Test results are to be submitted as part of the periodic reporting requirements.

When the 0.030 lb/mmBtu particulate emission limit becomes applicable, Paragraph 80 requires VEPCO to conduct stack tests for particulate matter on Units ES-3 and ES-4 to demonstrate compliance with that limit. Again, the tests must be conducted at least once per every four successive "QA Operating Quarters". Testing shall coincide with the testing required in Condition VI.D.1. Test results shall be submitted as part of the periodic reporting requirements.

Reporting

VEPCO shall submit Consent Decree periodic reports as required under Appendix B of the Consent Decree.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 72 and 9 VAC 5-80-490, that apply to all acid rain operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

TITLE IV (PHASE II ACID RAIN) PERMIT ALLOWANCES AND REQUIREMENTS

The Phase II permit was incorporated into the permit including the SO_2 allowance allocations and the NO_x requirements.

NO_X BUDGET TRADING PROGRAM REQUIREMENTS

The Bremo Power Station is subject to the NO_x Allowance Budget Trading Program (9 VAC 5-140-10) regulations and the facility submitted a permit application to EPA and DEQ dated October 30, 2002. These regulations affect units ES-3 and ES-4 and were incorporated into the initial acid rain operating permit. In 2009, NO_x Budget Trading Program (NBP) states affected by the Clean Air Interstate Rule (CAIR) will transition to the CAIR annual and/or ozone season programs.

CLEAN AIR INTERSTATE RULE (CAIR) PERMIT

On March 10, 2005, the EPA signed the Clean Air Interstate Rule. The final rule was subsequently published in the Federal Register on May 12, 2005. The rule will require 28 eastern states (including Virginia) and the District of Columbia to achieve specified emission reductions for new and existing electric generating units (EGUs). Virginia DEQ opted to meet the state's emission budget by requiring EGUs to participate in an interstate cap-and-trade system, administered by the EPA that caps emissions in two stages. Phase I emission reductions begins in the 2009 for the NO_x ozone season and annual programs and 2010 for SO_2 annual program. The facility submitted a CAIR permit application to DEQ

program. The facility submitted a CAIR permit application to DEQ dated June 21, 2007 with a revised application dated August 29, 2007. These regulations affect units ES-3 and ES-4 and are incorporated by reference into this renewal Title IV Operating Permit. Dominion's CAIR application is included as an attachment to the Article 3 permit. Phase II begins in the year 2015 for all programs for both pollutants.

In 2009, NO_x Budget Trading Program (NBP) states affected by the Clean Air Interstate Rule will transition to the CAIR annual and/or ozone season programs.

STATE ONLY APPLICABLE REQUIREMENTS

None identified by the applicant.

FUTURE APPLICABLE REQUIREMENTS

On July 30, 2007, the U.S. Court of Appeals for the D.C. Circuit Court (Court) vacated the Industrial, Commercial and Institutional Boilers and Process Heaters Maximum Achievable Control Technology regulation (Boiler MACT) contained in 40 CFR 63, Subpart DDDDD. The mandate also vacated the Commercial/Industrial Solid Waste Incinerators Definitions Rule (CISWI) contained in 40 CFR 60, Subparts CCCC and DDDD. The court vacated and remanded to the EPA both the Boiler MACT and the CISWI Definitions Rule. The Court rejected EPA's definition of "commercial or industrial waste," as incorporated in the definition of the CISWI unit. The Court concluded that the EPA's definition was too restrictive and exempted certain emission units that should be defined as boilers. Because an emissions unit can be regulated either by the CISWI rules or the Boiler MACT, but not both, the Court decision will potentially shift at least some of the units that are currently regulated under the Boiler MACT into the CISWI category. As a result of the Court decision, EPA needs to recalculate the stringency of the emissions standards for the newly expanded CISWI category and the narrowed boiler category. Sources that were subject to the vacated Boiler MACT may now be subject to case-by-case MACT under Clean Air Act Section 112 (g) or 112 (j). DEQ is in the process of determining if case-by-case MACT was triggered when the Court vacated the Boiler MACT. A case-by-case MACT determination may be required for Bremo's fire tube boiler (ES-1).

INAPPLICABLE REQUIREMENTS

40 CFR 60, Subpart D, 40 CFR 60, Subpart Da, and 40 CFR 60, Subpart Db have been specifically identified as being not applicable to units ES-3 and ES-4 as construction of the boilers took place prior to the applicability dates of these standards of performance (August 17, 1971, September 18, 1978, and June 19, 1984, respectively.) 40 CFR 60, Subpart Dc was identified as not being applicable for Unit ES-1 as this unit is less than 10 million BTU/hr heat input and 40 CFR 60, Subpart GG was identified as not being applicable to Unit ES-2 because the unit is less than 10 million BTU/hr heat input.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-490.

Insignificant emission units include the following:

Emission No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 5-80-720 B)	Rated Capacity (9 VAC 5-80-720
IS-1	Lube Oil Systems/Waste O Systems/Hydraulic Oil Syste	9 VAC 5-80-72(	VOC	
IS-2	215,000 Gallon #2 Fuel Oil T	9 VAC 5-80-72(	VOC	
IS-3	275 Gallon Gasoline Dispens Station & Tank	9 VAC 5-80-72(	VOC	
IS-4	500 Gallon Kerosene Tank	9 VAC 5-80-72(	VOC	
IS-5	Antifreeze Usage on Coal Conv	9 VAC 5-80-72(	VOC	
IS-6	Wendon (bridging agent) Usag Coal	9 VAC 5-80-72(	VOC	
IS-7	Flyash Handling System	9 VAC 5-80-72(	PM-10	
IS-8	Gravel Roads	9 VAC 5-80-72(	PM-10	
IS-9	Sand Blasters (1)	9 VAC 5-80-72(	PM-10	
IS-1(	Sewage Treatment	9 VAC 5-80-72(	VOC	
IS-11	Coal Sampling Systems (as received & as fired)	9 VAC 5-80-72(	PM-10	
IS-12	Ash Storage Ponds	9 VAC 5-80-72(	PM-10	
IS-13	Diesel Fire Pump	9 VAC 5-80-72(		150 HP
IS-14	Lime Slurry Tank	9 VAC 5-80-72(	PM-10	
IS-15	275 Gallon Fire Pump Diesel Tank	9 VAC-5-80-72(	VOC	
IS-16	10,000 Gallon Coal Yard Diesel	9 VAC-5-80-72(	VOC	

[1]The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the permit application are suitable for public review.

OTHER CONSIDERATIONS

On June 15, 2005, J. David Rives was made the Designated Representative (USEPA Acid Rain Program) and the Account Authorized Representative (USEPA NO_x Budget Program) for the Bremo Power Station. This administrative change was incorporated during the significant modification to the Title IV Operating Permit on October 25, 2006. On June 4, 2007, J. David Rives and Harry L. Miller were made the primary and alternate Designated Representatives, respectively (USEPA CAIR Program) for the Bremo Power Station. This was incorporated into the renewal Title IV Operating Permit.

PUBLIC PARTICIPATION

A public notice was published in the Charlottesville Daily Progress on November 16, 2007 announcing a 30-day public comment period for this permit. The public comment period ended on December 16, 2007, and EPA's comment period was scheduled to end on December 31, 2007 (concurrent review of the permit as both draft and proposed). However, EPA sent an email on December 20, 2007 stating that DEQ should proceed with issuance of the Dominion – Bremo permit. There were no comments received.